Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Partner \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Go Take a Walk

MC900295736[1]

1. Define displacements in your own words: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Measure the displacement from the classroom door to your seat for both you and your partner. Measure the displacement to the nearest mm. Record the information in the data table.
2. Define distance in your own words: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Now measure the distance from the classroom door to your seat for both you and your partner. Measure the distance to the nearest mm. Record the information in the data table.
2. Walk the path of your distance from the door to your seat that you just measured. Have your partner time how long it takes you to walk this path. Record the time in the data table.
3. Now measure the distance from the front of the room (at the dry erase board) to the back of the room (the cupboards in the back). Measure this distance to the nearest mm. Record the information in the data table.
4. Have your partner time how long it takes you to walk from the front of the room to the back of the room. Record this information in the data table
5. Repeat step 4 only this time switch who is walking and who it timing.
6. Now switch, the person who was walking will now be timing, the person timing will now be walking. Record this information in the data table.

Data Table

|  |  |
| --- | --- |
| Displacement from the door to your seat |  |
| Displacement from the door to your partners seat |  |
| Distance from the door to your seat |  |
| Distance from the door to your partners seat |  |
| Total time to walk from the door to your seat (in seconds) |  |
| Total time to walk from the door to your partners seat (in seconds) |  |
| Distance from the front of the room to the back |  |
| Total time for you to walk from the front of the room to the back (in seconds) |  |
| Total time for your partner to walk from the front of the room to the back (in seconds) |  |

Questions:

1. Was there a difference between the distance and displacement from the door to your seat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If so, which value was larger? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What was your instantaneous speed at time zero? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Calculate your average speed for walking to from the door to your seat. Show your work.
3. Calculate the average speed of your partner walking from the door to his/her seat. Show all of your work!
4. What are some factors that account for you and your partner having different average speeds? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Calculate your average speed for walking from the front of the room to the back. Show all of your work!
2. Calculate your partner’s average speed for walking from the front of the room to the back. Show all of your work!
3. Compare your average speed walking to your seat, and walking to the back of the room. Were they the same? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ If they were not, which one was faster? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Provide an explanation as to why one average speed may be fast or slower than the other.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What was your total displacement when walking from the front of the room to the back? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did you not have to measure it?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*\* Question 9 is on the next page! \*\*\*

1. You are out taking your dog for a walk around the town. First you travel 1.5 km east, then 3.0 km north, then 2 km east, and finally 1 km north before you and your dog turn around and take the same path back home.

Draw a scale diagram (using a ruler) to show the path that you are your dog took.

(Recommended scale: 1 cm = 1 km)

What was your distance one way? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What was your total distanced (round trip) walked? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What was your displacement before returning home? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What was your total displacement? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If the total walk for you and your dog took exactly 59 minutes, what was your average speed? Show your work!